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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Noriyoshi Kuroyanagi

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08/09/2005

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EXAMINER

CORRIELUS, JEAN B

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/856,005

Applicant(s)

KUROYANAGI ET AL.

Examiner

Jean B. Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-6 are objected to because of the following informalities:

claim 1, line 7, what does it mean by "a correlation function near 0 shift"? line 10, "the ZCCZ spreading sequence" should be replaced by "one of said ZCCZ spreading sequences" so as to be consistent with recitation in line 5; line 18, "to generate a demodulated output" should be inserted after sequence so as to provide antecedent basis for subsequent recitation in last two lines; last line what does it mean by "the demodulated output on the hard decision"?

claim 2, line 2, "each user transmitter" should be replaced by "each user includes: a transmitter"; line 6, shouldn't "the user transmitters" be replaced by "other transmitters"; last line, "response set" should be "responses" so as to be consistent with antecedent in line 5. in addition, in lines 2-3, the claim language suggests that each user transmitter includes "a base station receiver". However, as known in the art users, i.e. cellular phones, do not include a base station receiver, rather it is a mobile device that includes a receiving section.

claim 3, line 4, "a" should be deleted; line 8, what does it mean by "both sides of the 0 shift, including the 0 shift"? line 9, before means, "a" should be deleted. The same comment applies to lines 12 and 15. in addition, line before last, "producing" should be replaced by "preparing" so as to be consistent with antecedent in claim 1, line 4.

claim 4, what does it mean "...assigned to a system in a method"? in addition, claim depends on claim 3. however, it is noted that claim 3 is an apparatus claim while

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claim 4 is a method claim. Apparatus claim does not normally includes "method steps" and vice versa. Claim 4, line 7, what does it mean by "stratified family"? ;line 8, what does it mean by "cell number, user number"? is it cellular phone number/user phone number?

As per claim 5, what does it mean "...assigned to a system in a method"? in addition, claim depends on claims 3 and 4. however, it is noted that claim 3 is an apparatus claim while claim 4 is a method claim. Apparatus claim does not normally includes "method steps" and vice versa. what does it mean by "stratified family"? ;line 2, before combined, "first" should be inserted; line 3, before stratified, "the" should be inserted; line 4, before combined, "second" should be inserted.

Claim 6 recites similar limitations as in claim 4 or 5, therefore the comment made in reference to such limitations in claim 4/5 applies to claim 6. Appropriate correction is required.

### ***Drawings***

2. The drawings were received on 3/15/05. These drawings are acceptable. However, the drawings are still objected to for the following reasons.

3. Figure 13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the means for preparing binary zero cross correlation zone; means for producing an expanded sequence means for producing a transmission, means for demodulating, recited in claim 1, means for transmitting an isolated pilot frame, the base station receiver comprising the means for producing respective cross correlation function and demodulated output, as recited in claim 2, the means plus function elements, recited in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Priority***

5. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence(s) of the specification or in an application data sheet by identifying the prior application by application number (37 CFR 1.78(a)(2) and (a)(5)). If the prior application is a non-provisional application, the specific reference must also include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, last line, "the hard decision" lacks of proper antecedent basis.

The limitation "a demodulated output" recited in claim 2, line 8 is vague and indefinite as there is an unclear antecedent in claim 1, last two lines.

The term "relatively " in claim 3, line 12 is a relative term which renders the claim indefinite. The term "relatively" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 4, lines 1-2, "the product sequence  $S_{kp}^j$  " lacks of proper antecedent basis; line 7, "the stratified family" lacks of proper antecedent basis.

Note that any claim whose base claim is rejected is likewise rejected.

***Allowable Subject Matter***

8. Claims 1-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Response to Arguments***


9. Applicant's arguments, see pages 8-9 of the response, filed 3/15/05, with respect to the rejection under Suehiro and Applicant's admitted prior art and the 112 first paragraph rejection have been fully considered and are persuasive. The rejection of claims 1, and 3-6 has been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jean B Corrielus  
Primary Examiner  
Art Unit 2637

8/6/05